

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's amendment filed on March 11, 2008, which amends claims 1 and 12, and adds claims 21-28, has been entered.

Claims 1-4, 6, 7, 9-16 and 18-28 are pending.

2. The references cited in the IDS filed April 23, 2008 have been considered and are made of record.

3. Claims 1-4, 9-16 and 18-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The subgenus of compounds represented by Chemical Formula 1 as required for the device of present claims 1-4, 9-16 and 18-20 is not fully supported by the application as originally filed because the definition of R as "aromatic hydrocarbon except phenyl, C₉-C₁₂

hydrocarbon" is not fully supported by the application as originally filed. The original disclosure does not provide any specific examples of compounds in which any R is phenyl, and therefore there is insufficient basis for excluding compounds in which any R is phenyl. The original disclosure does not provide any specific examples of compounds in which any R is a C₉ hydrocarbon group, and does not set forth any other explicit disclosure providing support for the endpoint of C₉ in the C₉-C₁₂ range.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 9-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over lost count 1 of Interference No. 105,599.

While present independent claims 1 and 20 have been amended so as to not be anticipated by the lost count, the rejected claims are not patentably distinct from claims corresponding to the lost count because the subject matter of the rejected claims would have been an obvious modification to one of ordinary skill in the art at the time of the invention given the subject matter of the count. Aromatic hydrocarbons such as substituted phenyl groups would have been an obvious variant of phenyl, and hydrocarbons such as alkyl groups having 9 or more carbons would have been an obvious variant of alkyl groups having 1-8 carbons.

7. Claims 1-4, 9-16 and 18-20 are rejected under the principles of res judicata and collateral estoppel as not patentably distinct from the subject matter of lost count 1 of Interference No. 105,599. *In re Deckler*, 997 F.2d 1449, 24 USPQ2d 1448 (Fed. Cir. 1992).

The subject matter of present claims 1-4, 9-16 and 18-20, wherein each R in the compound represented by Chemical Formula 1 is independently or simultaneously selected from an aromatic hydrocarbon except phenyl or a C₉-C₁₂ hydrocarbon is not patentably distinct from the subject matter of the count in which R in the compound formula can be phenyl or alkyl having 1 to 8 carbon atoms. The present claim language of "aromatic hydrocarbon except phenyl" does not exclude derivatives of phenyl that would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention based on similar chemical structure. With respect to the present claim language of "C₉-C₁₂ hydrocarbon", alkyl groups having 9-12 carbons

are homologs of alkyl groups having 1 to 8 carbon atoms, and are encompassed by "C₉-C₁₂ hydrocarbon". Given the close structural similarity between an alkyl group having 9-12 carbons and an alkyl group of 8 carbon atoms, one of ordinary skill in the art at the time of the invention would have reasonably expected that compounds of the specified formula having alkyl groups with slightly more than 8 carbon atoms would have similar properties to compounds of the specified formula having alkyl groups with 1-8 carbon atoms, and would have expected the similar compounds to be suitable for use in the same types of devices.

8. In light of the interference count and the interference decision, the examiner suggests amending the definition of R in each of claims 1 and 12 as shown below:

--wherein, each R is independently or simultaneously selected from the group consisting of ~~aromatic hydrocarbon except phenyl, C₉-C₁₂ hydrocarbon~~; halogen, alkoxy, arylamine, ester, amide, heterocyclic compound, nitro, and nitrile (-CN) group.--

This suggested amendment would overcome all rejections set forth above.

9. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

10. Claim 21 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 5 of prior U.S. Patent No. 6,720,573 B2. This is a double patenting rejection.

Present claim 21 and patent claim 5 are both drawn to an organic light-emitting device comprising one or more layers interposed between an anode and a cathode, wherein the one or more layers comprise an organic compound represented by Chemical Formula 1a. Chemical Formula 1a is the same in both claims. Patent claim 5, by virtue of its dependence from patent claim 1, also requires the compound to be a p-type organic semiconductor. While present claim 21 does not require the compound to be a p-type organic semiconductor, the compound required by claim 21 is the same compound as required by patent claim 5, and therefore inherently has the same properties.

11. Present claim 21 corresponds to original claim 5, which had been rejected under 35 U.S.C. 101 as claiming the same invention as claim 5 of US 6,720,573 B2 in the Office action mailed August 17, 2006. In response to the rejection, claim 5 was cancelled. In the remarks accompanying the amendment filed March 11, 2008, which adds claim 21, applicant argues that a rejection of claim 21 under 35 U.S.C. 101 would be improper because "it is not inherent that the compound represented by Formula 1a...is a p-type organic semiconductor." This argument is not persuasive because Formula 1a represents a single compound; any property which the compound of Formula 1a as set forth in patent claim 5 possesses would also be a property possessed by the compound of Formula 1a as set forth in present claim 21.

New claims 22-28 claim subject matter similar to that claimed in US 6,720,573 B2, but are not identical in scope to any of the patent claims. A terminal disclaimer disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,720,573 was filed on December 05, 2006, and was previously accepted and recorded.

12. Claims 6, 7, 22-25 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 26 and 27 are allowed.

13. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

/Marie R. Yamnitzky/
Primary Examiner, Art Unit 1794

MRY
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